- Solutions for Electronic Specialty Markets (ESM)
  - Product Catalog for Electronic Specialty Markets
    - 3M™ Electronic Specialty Markets - New Product Releases
    - 3M™ Abrasives
    - 3M™ Adhesives, Cleaners & Compounds
    - 3M™ Breadboards & Test Clips
    - 3M™ Cable & Assemblies
    - 3M™ Copper Interconnects
    - 3M™ Fiber Optics
    - 3M™ Fire Protection
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Product Catalog for Electronic Specialty Markets › 3M™ Copper Interconnects › Headers › Low Profile, .100 in x .100 in Right Angle, 2500 Series ›

Printer-friendly format

3M™ .100" x .100" 4-Wall Header, Standard, Right Angle Through-Hole, 50 Contacts, 2550 Series, 2550-5002UB

.100" x .100" Low Profile, 50 Position, Solder Tails for .062 Thick Board, Mating plating thickness solder tail versions 30µ" [0.76µm].

[click to enlarge]

GTIN(UPC/EAN) : 0 00 54007 82747 4
3M Id : 80-6105-6537-8

Additional Information

Learn More . . .

Packaging Data
2550-5002, 3D IGES, rev. 01 - 3D Models (ZIP 274.4 K)
2550-5002, 3D Parasolid, rev. 01 - 3D Models (ZIP 226.3 K)
2550-5002, 3D Step, rev. 01 - 3D Models (ZIP 185.7 K)

Characteristics

Contact Material	Brass
Contact Termination Area Plating	200 µ" [5.08 µm] 90/10 Tin/Lead
Contact Underplating	100 µ" [2.54 µm] Nickel
Contact Wiping Area Plating	30 µ" [0.76 µm] Gold
Current Rating	2 Ampere
EPC Can View	Public
EU RoHS Compliant	No
Insulation Color	Black
Insulation Flammability Rating	UL 94V-0
Insulation Material	Glass Filled Polyester (PBT)
Insulation Resistance	>1 X 10^9 Ohms @ 500 Vdc
Interface Grid	.100" x .100"
Interface Style	Header (Rectangular Plug)
Latch/Ejector Type	None
Markings	3M Logo and Orientation Triangle
Mounting Option	None
Non-Operating Temperature	-55 to 105 Degree Celsius

Number of Contact Rows	2
Number of Contacts	50
Number of Walls	4
Orientation	Horizontal
Pitch	0.100 Inch
Polarization	Military & Center Bump
Primary Trademark Name	3M
Process Temperature Rating	<=235 Degrees C, with 90 Seconds over 215 Degrees C
Separable	Yes
Tail Length	.112 Inch
Termination Method	Solder Tail
Termination Style	Printed Circuit Board
Withstanding Voltage	1000 Vrms at Sea Level

3M™ Four-Wall Header

.100” x .100” Low Profile, SMT Straight, Straight and Rt Angle Through-Hole 2500 Series

- Low profile, space saving design
- Center slot polarization prevents mis-insertions and reduces insertion time
- Dual slot polarization means broader compatibility with competitive polarization designs (not 10 pos.)
- Optional retainer clip for locking sockets in place and increasing connection reliability in vibration-prone environments
- Optional high temperature insulator suitable for “no lead” soldering operations
- High temperature option in through-hole version suitable for “paste in hole” reflow soldering techniques
- Exposed solder tails (on right angle version) provide ease of cleaning and reduced repair costs
- Straight surface mount version available
- See regulatory information appendix (RIA) for chemical compliance information

Date Modified: March 24, 2008

Physical

Insulator	
Material:	Glass Filled Polyester (PBT), Glass Filled Polyester (PCT)- High Temperature Option
Flammability:	UL 94V-0
Color:	Gray (PBT), Beige (PCT) or Black (PCT)
Contact Material:	Copper Alloy
Plating	
Underplating:	100 µ” [2.54 µm] Nickel - Overall
Wiping Area:	Gold (See Ordering Information)
Solder Tails:	200 µ” [5.08 µm] Tin Lead or Matte Tin (See Ordering Information)
Marking:	3M Logo, Part Identification Number and Orientation Triangle

Electrical

Current Rating:	2 A
Insulation Resistance:	>1 x 10^9 W at 500 V_{DC}
Withstanding Voltage:	1000 V_{RMS} at Sea Level

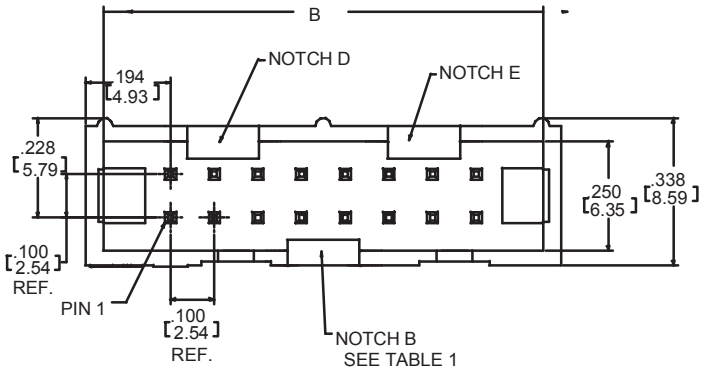
Environmental

Temperature Rating:	-55˚C to +105˚C
Process Rating:	260˚C, (High Temperature and PCT insulator versions only), single pass, (profile per J-STD-020C) PBT insulator version, maximum molded insulator temperature 191˚C (solder wave process only)
Moisture Sensitivity Level:	1 (per J-STD-020C)

UL File No.: E68080

3M™ Four-Wall Header

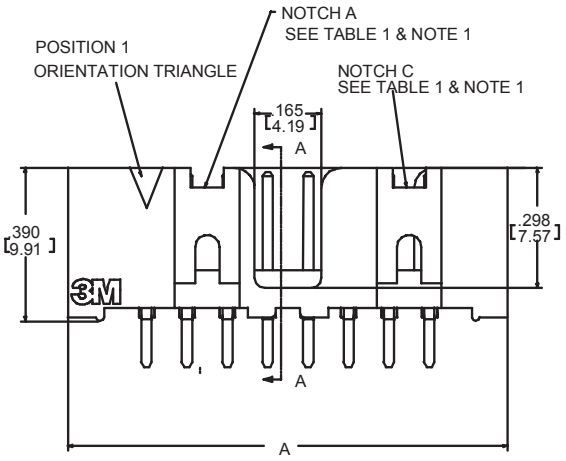
.100" x .100" Low Profile, Straight Through-Hole — 2500 Series

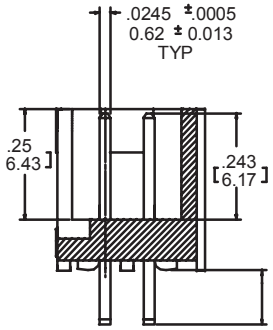


Inch
(mm)

Tolerance Unless Noted			
	.0	.00	.000
Inch	± .1	± .01	± .005

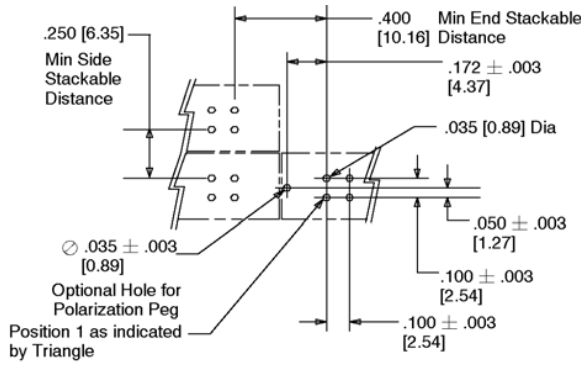
[ ] Dimensions for Reference only





.112 +/- .01[2.84] for 02&K2 versions
.155 +/- .01[3.94] for 03 versions

SECTION A-A



Recommended P.C. Board Hole Pattern
(Shown for mounting side of board.)

Table 1

Pin Qty	Dimensions A		Dimensions B		Polarizing Notches
10	.788	(20.02)	.708	(17.98)	BC
14	.988	(25.10)	.908	(22.06)	BCDE
16	1.088	(27.64)	1.008	(25.60)	ABCDE
20	1.288	(32.72)	1.208	(30.68)	ABCDE
24	1.488	(37.80)	1.408	(35.76)	ABCDE
26	1.588	(40.34)	1.508	(38.30)	ABCDE
30	1.788	(45.42)	1.708	(43.38)	ABCDE
34	1.988	(50.50)	1.908	(48.46)	ABCDE
40	2.288	(58.12)	2.208	(56.08)	ABCDE
50	2.788	(70.82)	2.708	(68.78)	ABCDE
60	3.288	(83.52)	3.208	(81.48)	ABCDE
64	3.488	(88.60)	3.408	(86.56)	ABCDE

Notes:
1. Notches A & C will accomodate 3M Polarizing Keys (3M Part #3518 or N3518).
2. Contact tails .0245 [0.622] wire with .0075 [0.191] corner radii & .028 [.072] diagonal.
3. See page 4 for kink tail positions.
4. Solder stand offs facilitate .01 clearance above board for reflow soldering.

Ordering Information

Prefix:
Blank = Std. Temp. Gray (PBT)(UB or UG Pltg. Req'd)
N = High Temp. Beige (PCT)(UB or UG Pltg. Req'd)
N = High Temp. Black (PCT)(RB Pltg. Req'd)

X25XX-60XX-XX

Pin Quantity:
(See Table 1)

Solder Tail
02 = for .062 [1.57] thick board
03 = for .094 to .125 [2.39 to 3.18] thick board
K2 = for .062 [1.57] thick board

Plating:
UG = 15µ" [0.38µm] Gold with 200µ" [5.08µm] 60:40 Tin-Lead Solder Tails (RIA E3 & C2 apply)
UB = 30µ" [0.76µm] Gold with 200µ" [5.05µm] 60:40 Tin-Lead Solder Tails (RIA E3 & C2 apply)
RB = 30µ" [0.76µm] Gold with 200µ" [5.08µm] Matte Tin Solder Tails (RIA E1 & C1 apply)

3M™ Four-Wall Header

.100" x .100" Low Profile, Straight Through-Hole 2500 Series

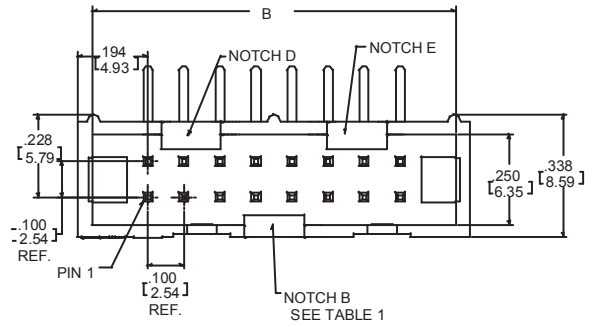


Table 1					
Pin Qty	Dimensions				Polarizing Notches
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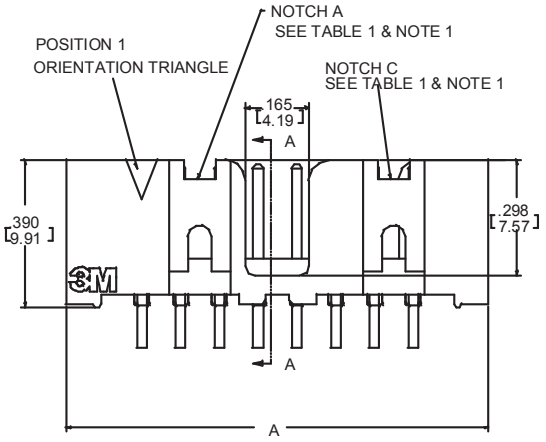
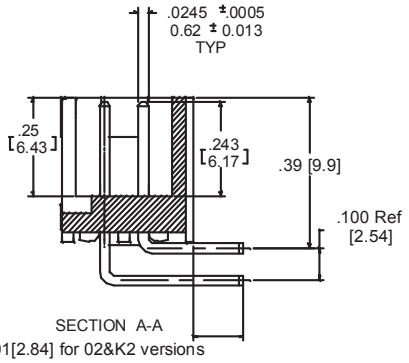
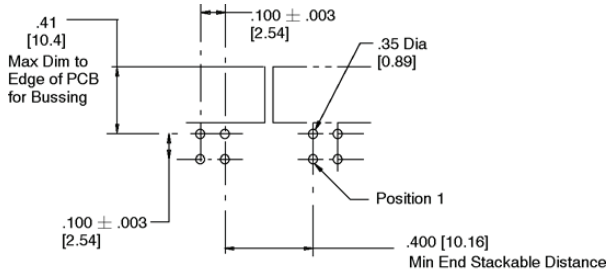
50	2.788	(70.82)	2.708	(68.78)	ABCDE
60	3.288	(83.52)	3.208	(81.48)	ABCDE
64	3.488	(88.60)	3.408	(86.56)	ABCDE





.112 +/- .01[2.84] for 02&K2 versions
.155 +/- .01[3.94] for 03 versions



Recommended Mounting Hole Pattern

Inch (mm)

Tolerance Unless Noted			
	.0	.00	.000
Inch	± .1	± .01	± .005

[ ] Dimensions for Reference only

Notes:
1. Notches A & C will accomodate 3M Polarizing Keys (3M Part #3518 or N3518).
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X25XX-50XX-XX

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Pin Quantity: (See Table 1)

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